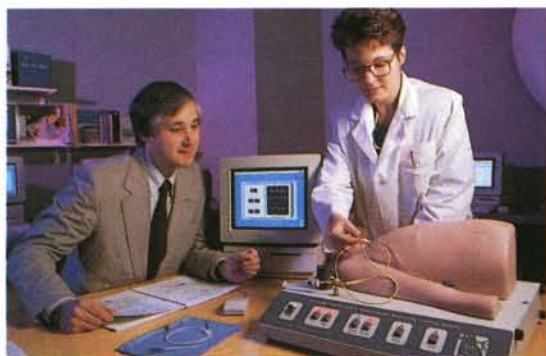


Medical Training Aid



Below, Dr. Steven S. Saliterman (seated) of Minneapolis, Minnesota is explaining use of the Dynacath Critical Care Patient Simulator™ to a medical resident. Incorporating NASA simulation technology, Dr. Saliterman developed the system as a means of training physicians, students and nurses in critical care management and hemodynamic monitoring (monitoring the pressures associated with heart catheterization procedures). He founded Dynacath Corporation, also of Minneapolis, to market the system.

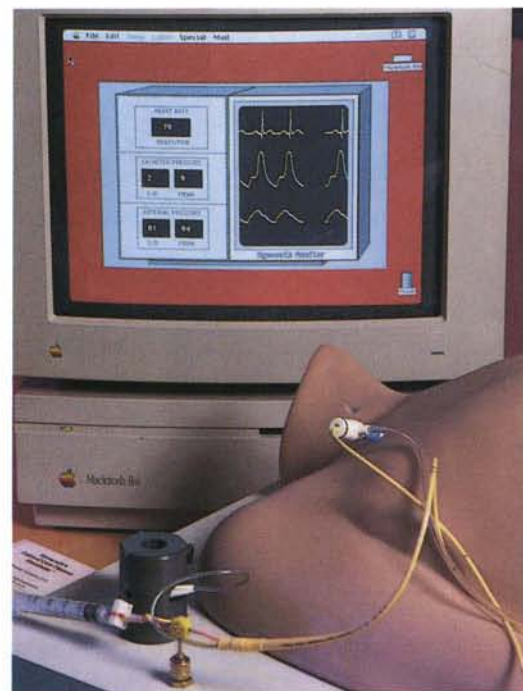
Linked to an Apple Macintosh computer, the main components of the Dynacath simulator are a computer program, a display unit (shown in closeup **at right**) and



a lifelike replica of a human torso.

Hemodynamic monitoring is typically performed by a physician in a hospital's intensive care unit. Its purpose is to measure accurately the pressures within the heart and the pulmonary artery to determine the type and extent of cardiopulmonary disease, to monitor heart function and to evaluate treatment options. Where training in this procedure was formerly conducted at the bedside of a live patient, the Dynacath system allows training to develop both patient care and procedural skills through repetitive simulation.

The system's display unit shows patient histories, progress notes, consultations, treatment options and results. Patients' responses change based on the treatments selected. The torso and its internal sensors permit repetitive practice of catheterization, with realtime simulation



of heart rhythms and pressures displayed on the screen. In addition to its value as a training aid, the system is useful as an aid to physician certification or as a tool for evaluating the quality of care delivery.

Since its introduction in 1990, many hospitals and research universities have adopted the system and a number of heart catheter-producing companies have purchased units.

The Dynacath system is based on Dr. Saliterman's own extensive medical and engineering background and on NASA simulation and instrumentation technology acquired during his employment at two NASA centers. He attended Mayo Medical School and Mayo Graduate School, Rochester, Minnesota from 1973 until 1980. During that time, he also served as a summer intern at Johnson Space Center (1973-74) and as a life sciences research fellow at Ames Research Center (1976). Dr. Saliterman is currently a practicing physician at a Minneapolis clinic; a consultant at Methodist Hospital in Minneapolis; an instructor in advanced cardiac life support for the American Heart Association; and senior aviation medical examiner for the Federal Aviation Administration. •

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